

REMARKS

An Office Action was mailed August 10, 2009. This response is timely. Any fee due with this paper, including any necessary extension fees, may be charged on Deposit Account 50-1290.

Summary

Claims 1-8 were examined. Claim 9 is withdrawn.

By the foregoing, claims 1 and 3 are amended, claims 10-12 are newly presented. No new matter has been added. The rejections are respectfully traversed.

Claim 1 has been amended to correct antecedent basis and also to recite that the visible side is the publicly-oriented visible side, which is opposite the rear side and distinguishes the visible side from the side edges.

Rejection under 35 U.S.C. §112

Claim 3 stands rejected under 35 U.S.C. §112, second paragraph as being indefinite. The claim is amended to overcome the rejection. Accordingly, the Examiner is respectfully requested to withdraw the rejection.

Rejections under 35 U.S.C. §103(a)

Claims 1, 4, 6, and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over WO 2001/45921 to Toncelli in view of U.S. Patent No. 3,560,294 to Potkanowicz in view of U.S. Patent No. 6,177,179 to Schock. Claims 2 and 3 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Toncelli '921 in view of DE 3043869. Claim 5 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Toncelli '921 in view of U.S. Patent No. 4,268,574 to Peccenini. Claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Toncelli '921 in view of U.S. Patent No. 4,959,401 to Bellasalma. The rejections are respectfully traversed for the reasons given below.

The Examiner is respectfully requested to note that the patent number for Potkanowicz was listed incorrectly. The correct number is U.S. Patent No. 3,560,294 to Potkanowicz.

1. The combination of Toncelli '921, Potkanowicz, and Schock does not teach, disclose, or suggest the presently claimed invention, specifically step (c).

Therein, step (c) of the presently claimed invention recites:

“depositing a web of continuous glass filaments on an upper surface of the first layer, the web of continuous glass filaments being pre-impregnated with one of the first hardening resin and a compatible resin.” Emphasis added.

First, the combination of Toncelli '921, Potkanowicz, and Schock (emphasis Potkanowicz) does not teach, disclose, or suggest depositing a web of continuous glass filaments. Rather, Toncelli '921, Potkanowicz, and Schock (emphasis Potkanowicz) teaches a method for combining a viscous resin and reinforcing glass fiber strands. 1:56 et al. These strands comprise a plurality of chopped strands 12 that are chopped in a chopping station 10. 2:29 et al.

In contrast, the glass filaments of the presently claimed invention are continuous and disposed in a web so that they may be more easily deposited. Neither of these aspects are taught, disclosed, or suggested by Toncelli '921, Potkanowicz, and Schock (emphasis Potkanowicz).

Second, Toncelli '921, Potkanowicz, and Schock (emphasis Potkanowicz) teaches that “[t]he individual strands are not bound together by any resinous binder to flow better into intricate shapes.” 2:38 et al. A thermosetting resin 2 is spread in a uniform thickness layer over a polyethylene film via a doctor blade. 2:08 et al. The chopped strands are then deposited on this resin and pressed into it. 2:30, 2:37-38. A further layer of resin is added onto the chopped strands and these layers are then compacted. 2:46 et al. This produces a composite sheet. 1:18, 3:03. Indeed, as evidenced by the manufacture to bond as much resin together as possible, hence the chopping (2:41-45), the repeated rolling (2:57-3:23) to create as complex as possible a laminate sheet.

Thus, the cited art fails to teach, disclose, or suggest depositing a web of continuous glass filaments of the presently claimed invention. Rather, the cited art teaches a composite laminate sheet of short, chopped strands. The rejection avers it would have been obvious to “*to impregnate the layers of [Toncelli ‘921] as taught by Potkanowicz. The motivation for doing so is that this would provide an economic process for producing an inexpensive raw material . . . [per 3:30-32]*”

Applicant respectfully disagrees. Toncelli ‘921, Potkanowicz, and Schock (emphasis Potkanowicz) provide a laborious procedure to develop a laminate sheet. The presently claimed invention is a web of filaments. Wherein the sheet lacks an interstitial spaces, the web of glass filaments includes interstitial spaces. The continuous glass filaments permit appropriately sized aggregates of each layer to fit within aggregates of the next layer within a boundary zone and, thus, aids the superior bond of the layer, yet keeps the layers separate. A composite laminate sheet only serves to separate the two layers and its bonding strength to each layer onto which borders determines the products overall strength.

Accordingly, the Examiner is respectfully requested to withdraw the rejections.

2. The combination of Toncelli ‘921, Potkanowicz, and Schock does not teach, disclose, or suggest the presently claimed invention, specifically steps (c) and (h).

In the presently claimed invention, by pre-impregnating the glass filaments with a hardening resin or a compatible resin, a number of important features of the finished slab are possible. The two mix layers comprise different granular material. A first material can be chosen from natural or man made sources and has a generally pleasing accepted aesthetic feature and that is used as a visible side of the slab. A second material can include a light-weight granular material. By using glass filaments that are pre-impregnating with a hardening resin or a compatible resin, these two layers can be very strongly bonded without “*contaminat[ing] the visible layer, which must maintain optimum aesthetic features,*” e.g., the first layer does not comprise the second granular material. 6:17 et al.

Toncelli '921, Potkanowicz, and Schock (emphasis Schock) teaches an integral, board-like component for use a kitchen's working surface. The board while having a visible and a rear side is comprised of a polymer matrix and an unattractive inorganic filler that is intermingled. The visible side includes a filler content of 20% and the rear side an inorganic filler content that is much higher, 50-90%.

Thus, as now recited clearly in step (h), *the first layer does not comprise the second granular material*. Accordingly, Toncelli '921, Potkanowicz, and Schock (emphasis Schock) does not teach steps (c) and (h). This is possible because the web of glass filaments includes interstitial spaces. As discussed above, the continuous glass filaments permit appropriately sized aggregates of each layer to fit within aggregates of the next layer within a boundary zone. This aids the superior bond of the layer, yet keeps the layers separate. A composite laminate sheet only serves to separate the two layers and its bonding strength to each layer onto which borders determines the products overall strength.

Indeed, the combination of Toncelli '921, Potkanowicz, and Schock is unworkable to keep the two layers separate so that the two mix layers comprise different granular material. As noted above Toncelli '921, Potkanowicz, and Schock (emphasis Potkanowicz) provide a laborious procedure to develop a laminate sheet using chopped strands.

There is no suggestion in Potkanowicz or in Toncelli '921 that the laminate sheet is sufficiently dense and strong to withstand vibro-compaction. One skilled in the art would not have any reference without undue experimentation from which to evaluate whether the changes are needed to the resin, to the vibration frequency, to the length of the strands, to the compaction pressure, or all of such.

In fact, nothing in any of the references suggests that the chopped strands remain in their present state when introduced to a vibratory frequency. As is well understood by the principles of resonance, the chopped strands will align at certain frequencies because each of the strands has a resonant frequency and given its size will move relative to the mix. In contrast, the continuous glass filaments have a non-specific resonant frequency due to their length and complex shape

within the claimed web. Once the chopped strands are aligned the strands would not keep the two layers separate so that the two mix layers comprise different granular material.

Accordingly, the Examiner is respectfully requested to withdraw the rejections.

3. The combination of Toncelli '921, Potkanowicz, and Schock does not teach, disclose, or suggest the presently claimed invention, specifically step (d).

Therein, step (d) of the presently claimed invention recites:

depositing a second mix comprising a second filler, a second granular material, and one of the first hardening resin and a compatible resin on an upper surface of the web to form a second layer, the second granular material being a light-weight granular material, the one of the same hardening resin used in the mix and a compatible resin being present in the second mix with a volumetric percentage substantially equal to a volumetric percentage of the hardening resin in the first mix

None of the references teach, disclose, or suggest that hardening resin or the compatible resin are provided in the ratio as claimed. Toncelli '921, Potkanowicz, and Schock teach, disclose, or suggest a ratio that when applied to the presently claimed invention differs markedly.

Accordingly, the Examiner is respectfully requested to withdraw the rejections.

All dependent claims are allowable for at least the same reasons as the independent claim from which they depend.

In view of the remarks set forth above, this application is believed to be in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper, including any necessary extension fees, may be charged on Deposit Account 50-1290.

Respectfully submitted,

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CUSTOMER NUMBER 026304
Docket No.: SAIC 22.355 (100788-00110)